

## **ABSTRAK**

### **PHYSIOLOGY CHARACTERISTICS OF RAMPAI TOMATO FRUIT (*Lycopersicon pimpinellifolium*) IN MODIFIED ATMOSPHERE STORAGE**

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Rampai tomato one of vegetables that has promising prospect in Indonesia market since it provides higher economic value compared with common tomato fruits, rampai tomato is also preferred by the public, especially the people of Sumatra which is used as a flavoring ingredient cuisine of Sumatra. However, the rampai tomato is a agricultural commodity that prone to damage after harvest. This is because rampai tomatoe still undergoing a process of respiration. It is therefore necessary to prevent damage to the fruit proper post-harvest handling. One way to prevent damage to the storage by using modified atmosphere (air-CO<sub>2</sub>) that can extend the shelf life of fruit. This study aims to determine the effect of gas composition atmospheric constituent micro (Air-CO<sub>2</sub>) storage to changes in total dissolved solids, total acids, the level of violence, respiration rate, and shelf life of fruit during storage of cold temperatures (10 ° C) and room temperature (28 ° C).

The research was conducted at room temperature and cold temperatures combined with the composition of the O<sub>2</sub>-CO<sub>2</sub> gas that flowed into the pure storage bottle with composition A (5% O<sub>2</sub>, CO<sub>2</sub> 5%), B (10% O<sub>2</sub>, CO<sub>2</sub> 5%), C (5% O<sub>2</sub>, CO<sub>2</sub> 10%), C (10% O<sub>2</sub>, CO<sub>2</sub> 10%).

In this study the value of TPT tended to stabilize with the increase and decrease in total acid at 10 ° C. The storage temperature The total acid of rampai tomato fruit decreased volatile fastest rate of decline obtained in treatment D. Hardness rampai tomatoes in all treatments and the gas temperature decreases. Respiration rate at 28 °

C decreased at the beginning of storage, whereas at 10 ° C respiration rate at day 16 in treatments A, B, and C have increased until the end of storage. Storage at 28 ° C had a shelf life of 10-12 days while the optimal temperature of 10 ° C had a shelf life of 18-21 days optimal.

Key words: rampai tomato, TPT, total acid, hardness, respiration rate, shelf life.